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The Sign-ificant Body: Finding Corporal Meaning in Literature, Film and Cyberspace.

by

Jason Francesco Suriano

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Arts.

in

Humanities Computing

Department of Comparative Literature, Religion, and Film/Media studies.

Edmonton, Alberta

Fall 2003

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled The Sign-ificant Body: Finding Corporal Meaning in Literature, Film and Cyberspace, submitted by Jason Francesco Suriano in partial fulfillment of the requirements for the degree of Master of Arts in Humanities Computing.

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Abstract

The popular understanding of the body is an amalgamation of numerous scientific, cultural and computational discourses. An analysis of literature, film and cyberspace portrays a notion of a body that transcends the media. I believe that through the analysis of various media a specific contextualization of the body will emerge. These contexts will enable users of literary and textual media to gain a greater understanding of the body in both the physical and virtual environments.

Although it is possible to quickly accept or dismiss prophecies of the body, what is significant is the analysis of the body that is taking place. Because the body is one element that all human beings have in common, its importance is undeniable. It is through the examination of the representations of the body that we will gain a greater understanding of the ever changing bodily perspective.

For Jenny

Acknowledgements

I would like to express my thanks to all of the many friends, professors and colleagues who have contributed to making this thesis possible. A special thanks to my supervisor Stefan Sinclair, whose input in the writing process has been invaluable. I would also like to acknowledge Harvey Quamen and Sean Gouglas who offered advice throughout the writing process.

I am also very grateful to all current and former staff of the Faculty of Arts. In particular I would like to thank Nasrin Rahimieh, Jane Wilson and Janet Ould. Your dedication and willingness to go the extra mile are an inspiration to us all.

I would also like to thank all of my friends especially Jeremy Cosgrove, Kosta D'agnone, Joe Kelenc, Grand Lau, and Ryan Seeman. Thank you for your continued support and constant reminders that there are other things outside of academia such as great movies, music, Vegas and sport.

A special thanks, finally, to my parents Frank and Maureen Suriano who have offered their support and encouragement throughout my academic career. To my sisters Daniela and Liana, grandparents and extended family, your love and generosity will never be forgotten.

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Introduction

The popular understanding of the body is an amalgamation of various scientific, cultural and computational discourses. From literary theorists such as Jean Baudrillard to cyber-theorists such as Marie-Laure Ryan one element is always present: the body. It is my contention that there is a persistent form of body or bodily metaphor in literature, film and cyberspace. Often, the media user may not realize the importance or focus that the author has placed on the body. This thesis expresses my desire to examine a variety of literary, cinematic and cybernetic contexts in order to gain a greater understanding of the ever changing bodily perspective. I believe that a specific contextualization of the body will enable users of literary and textual media to gain a greater understanding of the body in both the physical and virtual environments.

In order to further contextualize the body, the avenues and environments in which the body is presented must be analyzed. The first chapter of this thesis deals with the particular contexts that magnify our perceptions of the body. In this chapter, the argument that emerges is one of a body that has a myriad of possible meanings primarily because of its variable context. Because a body can have a variety of meanings, it is difficult to realize one specific or universal understanding of the body. However, because of cultural phenomena such as literature, film and the emergence of computers, the body can be analyzed from numerous

perspectives. For example, the literary landscape enables a body with seemingly infinite possibilities. Images of fantastic, super-human bodies to hybrid bodies are possible in order to make a variety of statements. In other instances, I will argue that the body is instantiated as a sign-ificant other, where the body is devalued of meaning because of an emphasis on the image of the body instead of the body itself. This is a compilation of works or statements that allows the reader to understand a particular perspective of the body that may differ from a personal understanding.

Textual or simulated environments also afford the opportunity to analyze the body in a variety of contexts. The second chapter further develops the idea of corporal contextualization in the analysis of the text and the bodily metaphors that pervade the text. I believe that metaphorical attribution enhances a personal understanding of the body as the metaphor itself can represent both a particular meaning and a bodily function or capacity. In this case, it is my contention that hypertext is a system based on bodily metaphors used to create the illusion of an immersive environment. In addition, the comfort of print and electronic media is often dependent on a level of interactivity and association made between the physical and the textual body. Any distinctions that are made between print and electronic texts allow for further examination of body relational media (body relational media is any type of media that is

connected to some form of corporal contextualization and metaphorical attribution).

The analysis of a variety of literatures and films also enables a further understanding of how the body is used to evoke a specific reaction. The third chapter is focused on various fictional literatures and films that represent the body as both a collection of parts and as a whole. Bodily awareness is something that is imperative for an author or filmmaker. In both instances, bodily movements, interactions and simulated appearance affect the reader's or viewer's personal bodily perceptions. However, technology has created the possibility of a life-like environment without barriers or restrictions. Although it is possible to quickly disprove of any idea that promotes technology as a perfect bodily environment, it is important to understand the possibilities of the technology. Further, notions of the cyborg (the fusion of human and machine) are represented in a variety of films and literatures as a series of fictitious events. However, it may be possible that literary and cinematic instantiations of the cyberbody have already moved beyond fiction and are represented in every cybernetic interaction.

Further analysis of bodily metaphors and cyberspace allows for a greater understanding of how our body interacts within these systems. The fourth chapter deals with the structures of the literary corpus and the World Wide Web. I believe that the representations of the textual and

virtual bodies are based on notions of connectedness; that many of our organizational structures are founded on perspectives of the body in order to make them relational. Further, understanding our bodily identity will allow us to better understand the effects of current and future technologies. Current cyberspace technology provides an environment where an identity can be re-defined and re-created depending on a variety of circumstances. I believe that the recreation of identity will create the image of a new community with fewer rules, where individuals can change and recreate their body as they choose.

In the artificial/virtual environment of literature, film and cyberspace, we are better able to understand the effects of a perceived environment without boarders or restrictions. Further, an analysis of these environments is crucial to enhance our understanding of the body and how its networked relationships affect its construction and appearance. It is also important to understand the shifting bodily perspective without quickly condemning or accepting new technologies. It is through continual analysis and discussion that we will be better prepared to deal with the effects of technologies on the body. For this reason, I believe that literature, film and cyberspace should be continually evaluated with an open, questioning mind in order to contextualize a greater understanding of self.

Chapter 1: Contextualizing the Body

In both the literary and virtual world, the body is a focal point of attention. The body can have both a singular or polyvalent meaning and, at times, it seems to be undefined because it appears to be in a state of flux. In a literary context, the idea of the body is used in various ways; for instance, the "body" of the text, the author as "embodied" in the novel, etc. Similarly the cybernetic or virtual world is an environment complete with bodily images and concepts that relate the technology to the user. Thus, the user is embodied in a virtual world that mimics the body as the electronic system takes in information and attempts to react on the information received.

Because the body is represented in various contexts such as in literature, technology and culture, its meaning can be analyzed and interpreted. In particular, it is important to understand how the body is perceived and created within both the literary and the virtual environment. Notions of the changing bodily environment and bodily culture are based on Jean Baudrillard's postmodern description of simulation; where "simulation is the collapse of the real with the imaginary, the true with the false" (Horrocks 109). By examining the contextualization of the body and bodily experience in both a literary and virtual context, there is a greater understanding of the body and its significance.

The emergence of bodily analysis is a more recent development in literature, philosophy and science. Dani Cavallaro believes that because there is renewed interest in the body:

> We can no longer view the body as a natural object. The body is actually a cultural representation, constructed through various media, especially language. Societies produce ideals of the proper body in order to define their identities. Yet time and time again the body's boundaries turn out to be uncertain. (4)

Cavallaro contends that the body is a cultural representation that cannot be easily defined because of the inherent difficulties of defining culture. In modern society, the word culture evokes constant change and while some cultural notions of a particular society may remain the same, the overall ideas about a given culture are always in a state of flux. If Cavallaro's contention is true, if the body is in fact a cultural representation, then it will remain in a state of constant change. For Cavallaro, "physical form is not a natural reality but a cultural concept: a means of encoding a society's values through its shape, size and ornamental attributes" (4).

Cavallaro believes that the body is comprised of both a singular and collective identity. First, it is singular in nature because it describes an individual identity. There is only one unique, individual body that conveys one particular identity (although notions of cloning have begun to challenge this notion). Secondly, the body is collective in its corporate identity. In this instance, the body is actually an amalgamation of

different bodies that can be bought and sold through advertising. For example, a bank or credit card company references bodily identity as a collection of numbers where the assigned card or account number represents the individual user. Finally, the body can be both material as a physical organism but also immaterial as a body of beliefs, legends or myths (Cavallaro 7). The language that is used to describe the body is often complex and the concept of the body can be attributed to various things. Various "idioms, expressions and metaphors" are based on the body and bodily functions (Cavallaro 8). Other bodily concepts often relate to notions of physical expression, body language and tactile interaction.

The fantastic or hybrid body is something that has been apparent in literature for centuries. Authors such as Mary Shelley, Edgar Allan Poe and Guy de Maupassant have used the ideas of exaggerated or unrealistic bodies to create a sense of fear or anxiety in their readers. For example, Mary Shelley's *Frankenstein* presents the idea of an artificial human and its interaction with society. In a similar fashion, Edgar Allan Poe's *Tell Tale Heart* is an example of literature that uses the idea of a "hideous heart" and a "deformed eye" to drive the main character to insanity.[1] For Cavallaro, the body is incomplete; the constructed literary body is imagined "in order to express the subliminal awareness that the body is

[1] I will further analyze the exaggerated body in Chapter 3.

not whole and to keep the fear of bodily incompleteness at bay" (15). If Cavallaro is correct then the body is something that can be re-created and re-imagined for numerous purposes. The creation of the body could also be the result of a desire to push the limits of the body. It may be the case that literature attempts to express what the body is not so that we may attempt to understand what it is. Hideous and distorted bodily features may allow the reader to re-examine personal notions of the body.

Literature and literary scholarship attempt to create alternate meanings or representations of the body. The text- the physical manifestation of the book- is like a body because it can grow through the addition of pages, develop or change over time through interpretation or fall apart like a biological organism (Cavallaro 7). Roland Barthes and Jacques Derrida argue that "the writerly text is always already immaterial, allusive and intertextual- even in print" (Snyder 120). Other emerging forms of literature such as hypertext are also described as representations of the body. Scholars such as Robert Nevaldine believe that hypertext is a more appropriate bodily representation of text. For Nevaldine, the reader is presented with a more fluid-like representation of the body of a text. Printed text can be bound, touched and held because of its physical properties. Hypertext is a system of connections but it is not tactile and it cannot be maintained as a bound, physical representation. It is a virtual representation of the text. If it is the case that

both traditional and hypertextual media are "immaterial, allusive and intertextual," does this change our idea of the literary as well as the physical body? If there were such things as literary bodies and collective bodies of work or a corpus, then they would appear to be unstable and not easily definable, like the body. The word corpus is the Latin word for body which signifies both the physical body and the collection of facts or things.[2] The corpus is significant because it represents a basis for structure and organization.[3]

One of the greatest works of literature, *Great Expectations*, is several stories folded together and "enveloped" in a structure that gives the effect of continuous narration without the linear logic inherent in that conventional form (Sciolino 245). In this case, the textual body is described as having a "conventional form." However, it is possible for a textual body to be without a specific conventional form because each individual author constructs each novel differently. The author is the creator and builds a "body" of work within a particular mold. However, textual perception, like the body, changes over time. Certain texts are placed in specific categories so that they may be defined. Just as human bodies are defined by the period and space which they inhabit, so too are the texts. As time progresses, sections of a text are analyzed, interpreted

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[2] For an in depth analysis of the word corpus see:
http://www.etymonline.com/c9etym.htm

[3] Notions of corpus and incorporation are discussed at length in Chapter 4.

and then reinterpreted. For Robert Neveldine, there is a death of the traditional text and "the text as a system of signs or a matrix of codes must be given a proper burial" (61). Likewise, in his structuralist phase Roland Barthes argued for the death of the author. If it is the case that both the text and the author are dead and buried, what is left for the reader?

Rhetoric of bodily death might lead some to attempt a form of autopsy on the textual corpse. What an autopsy would reveal is an internal system, a series of textual organs known as the narrative. The narrative entices the reader to the text through its illusions of alternate realities. Marie-Laure Ryan explores the narrative as a representation of a type of virtual reality. Ryan's example is based on the instruction that is given by the author to the reader by way of the narrative. Ryan explains the narrative as a constructed reality or a type of voyage:

> The instructions to the reader that open [Italo Calvino's] *If on a Winter's Night a Traveler,* suggests the rites of passage through which various cultures mark the crossing of boundaries between the profane and the scared or between the major stages of life. Opening a book is embarking on a voyage from which one will not return for a very long time. (90)

But this is only one possible interpretation of the narrative. Other interpretations are endless and it is possible that some narratives may not be intended to take the reader on a voyage. Ryan believes that there are four features that make up the concept of world: "connected sets of

objects or individuals; habitable environments; reasonably intelligible totality for external observers; field of activity for its members" (91). Ryan's explanation of the narrative is that it is imperative to the life of the textual body. In many instances, the narrative resembles specific elements that are common to a particular society. If a narrative is successful, it will provide adequate escape for the reader because it will somehow relate to the human condition, its physicality/mentality or its environment.

In order to further understand the body, the context in which the body is maintained must be examined. For Jean Baudrillard, the body is engaged with what he describes as simulacra and simulation. The simulacra is the "generation by models of a real without origin or reality: a hyperreal" (1). What Baudrillard describes as the real "is no longer really the real, because no imaginary envelops it anymore. It is a hyperreal produced from a radiating synthesis of combinatory models in a hyperspace without atmosphere" (2). The hyperreal is a world comprised of a collection of images that are believed to be real. Umberto Eco describes the hyperreal as a system where the "completely real" becomes identified with the "completely fake" (7). In the hyperreal, the "absolute unreality is offered as a real presence" (7). It becomes difficult to identify an original so the sign gains value over the referent. A sign is made up of both a signifier and the signified. It is the signifier (the word or acoustic image) that carries meaning and the signified is that to which

it refers (Appignanesi 59). In the hyperreal, distinctions between the signifier and signified are blurred because of a belief in the reality of the models/images. Therefore, what was previously represented as a signified object, such as a tree in nature, loses its meaning as there can no longer be a distinction between reality and the simulacra.

Contemporary film culture expands on the notion of the hyperreal environment in films like *The Matrix*. *The Matrix* is based on the idea that our world is not what we see. It is a collection of images, generated by computers and concealed from the humans living in the system. *The Matrix* represents the filmmaker's view of what could be described as the hyperreal. Eco believes that our world is based on a collection of images where "the sign aims to be the thing, to abolish the distinction of the reference, the mechanism of replacement" (7). In the film, only a select few humans, the main characters, know what is happening behind the scenes while others believe that the images are reality. One character, who has seen both sides of the system, says that "ignorance is bliss" and that he prefers a system of images to the real. In comparison to our fashion culture, companies such as Nike play on the idea of images as distinct representations of the body that are beyond shoe and clothing merchandise. The word Nike is based on a mythological Greek figure that

represents the goddess of victory.[4] The company plays off this image of victory in its representation of victorious athletes pushing their bodies to the limit. The athlete's desire and success is paralleled with the appearance of the Nike image on the athletic gear. Further, the word Nike has now been replaced with an image; a "swoosh" logo that remains associated with victory but also includes youth, endurance, popularity, etc.

The hyperreal or simulacra represents a set of images that re-create our bodily appearance. If the hyperreal creates our reality, then the real becomes "not what can just be reproduced, but what is already reproduced" (Horrocks 109). Companies like Coca-Cola use slogans like *The Real Thing* to enforce a desire for more imagery. [5] Fulfilling our bodily desires or wanting "more" drives our desire for the hyperreal. As Eco explains:

> This is the reason for this journey into hyperreality in search for instances where the American imagination demands the real thing and to attain it, must fabricate the absolute fake; where the boundaries between game and illusion are blurred, the art museum is contaminated by the freak show, and falsehood is enjoyed in a situation of "fullness," of *horror vacui*. (8)

So can we really know the difference between the real body and what is presented as "the real thing" in the hyperreal?

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[4] For more information on the mythological Greek figure Nike, see: http://www.theoi.com/Ouranos/Nike.html

[5] See Umberto Eco *Travels in Hyperreality* for more examples of hyperreal imagery.

Both Baudrillard and Eco explore notions of the real at length. In both cases, Disneyland is used as the primary example. For Baudrillard, Disneyland represents a world where "the adults are elsewhere, in the 'real' world but at the same time they are there to act the child in order to foster illusions as to their real childness" (13). For this reason, "the imagery of Disneyland is neither true nor false," it is an illusion but it also recreates the world around it. The emergence of Disneyland then recreates the surrounding area, the United States, as another simulated environment. Disneyland symbolizes the desire for a large house with the white picket fence, a flawless American way of life based on simulation. These examples are used to "mask the fact that real is not real to ensure that the reality principle is not threatened" (Horrocks 112). If Baudrillard's contention is true then it is virtually impossible to determine what is real and what is not because everything is a product of the "reality principle." The "reality principle" is the idea that there is something real, a true reality that exists outside of a created reality such as Disneyland (112). However, Baudrillard contends that Disneyland camouflages the fact that America is also Disneyland because it too is composed of simulated elements (112). If it is the case that the "reality principle" is fictitious and everything is based on simulation, individuals who attempt to define body image and reality based on their

surroundings can never really be certain if there is a specific bodily reality.

The fashion industry is a major contributor to the idea of defining bodily reality based on imagery and simulation. Companies such as Nike create an artificial image of the body, one that magnifies and promotes a specific, simulated appearance. The corporate goal is to create a deep, inner need for designer clothing. In many communities, such as the inner cities and impoverished communities,

> A 'deep inner need' for designer gear has grown so intense that it has confounded everyone from community leaders to the police. Everyone pretty much agrees that brands like Nike are playing a powerful surrogate role in the ghetto, subbing for everything from self-esteem to African-American history to political power (Klein 370).

In this case, Klein's argument goes further than a simple promotion of external appearance. For Klein, there is a "surrogate" role that manifests itself from the imagery. The clothing begins to symbolize other meanings for the body such as social status and self-worth. Because companies create a desire for replacement of the original with an image, there becomes a "deep inner need" to reproduce an artificially created self in the system. This inner need is nurtured by a surrogate corporation that enables a continual process of masking bodily and societal imperfections.

The creation of the logo and designer body can be attributed to the language that is used to describe the imagery. Jean-Francois Lyotard

discusses the ways in which the various states of society and societal imperfections are a result of language games. In Lyotard's *Postmodern Condition*, he contends that there are no common sets of rules, norms or values in language games and that the postmodern condition is a linguistic project on language games, narratives and metanarratives. One could argue that a language game has emerged from the earlier example of what is considered "real" and "the real thing." By having Coca-Cola make the statement that its product is "the real thing," is the company following the rules of a proper language game? Granted, Lyotard is discussing the compatibility of the languages of science and the arts but could his theory of language be applied to cultural language? Since it is difficult to define what is "real" we will have difficulty defining "the real thing." If it is the case that it is difficult to agree on a language to define literature, the arts, science and culture how can we expect to define the body? The problem is deciphering whether or not the body can be singularly defined or if it is defined by its inclusion in literature, the arts, etc. According to Lyotard, language games are "incommensurable," and they cannot coincide. However, "incompatible accounts must coexist because they enter into disputes over matters in which they have a shared interest" (Williams 31). Therefore, if language games are "incommensurable" and if Eco's earlier contention that the sign is in fact destroying the referent, there are serious ramifications for the body and

its distinction as an original. This replication could be described as the sign-ificant other; where the sign dominates everything from interaction to representation.

The other body is a true representation of a societal desire for the sign over the referent. Thus, what we have created is an environment of "bodies that cannot be represented, either to others or to themselves, bodies enucleated of their being and of their meaning" (Baudrillard 102). In the simulacra, we become a collection of signs. The sign-ificant other is our other body or body double, the body that we present to others, tattooed with the images of corporate America.

In a section of *Simulacra and Simulation*, Baudrillard discusses the idea of the body and the body double. Just as Cavallaro comments on the notion of the perfect body or the genetically altered body, so too does Baudrillard. The body double for Baudrillard is a sequence of dreams, of a perfect duplication or multiplication of being. The body, however, is destroyed when the dream is brought into the real (95). Further, notions of cloning, where a genetic double is created through technology, have spread from thoughts of science fiction to reality. In this case, the body that is created in a laboratory is a mirror for the first, a genetic copy. The image has been created of another complete body. When cloning is accomplished, the body ceases to maintain a sense of unity or singular distinction because of the emergence of the double. Granted, we may be

able to think of our bodies in various ways, as Cavallaro describes, but now we must conceive of an actual replication of the body.

Technology has also created alternate, virtual environments that are designed to construct a new reality for the body. Virtual reality represents a system that "engenders a new combination of human-machine which places in question the fixity and naturalness of the human perceptual apparatus" (Porter 43). This human-machine system is where the body is placed in a context outside of natural experience. It is a virtual experience that goes beyond computer generated immersive environments and includes everything from Internet communications, such as e-mail, databases and newsgroups (Porter 44). Systems that are currently in place such as the Internet have slowly incorporated users into a world of the virtual or the hyperreal. To experience the hyperreal or virtual reality is to be "sheltered from the imaginary, and from any distinction between the real and the imaginary, leaving room only for the orbital recurrence of models and for the simulated generations of difference" (Baudrillard 3).

One perspective of the cyberspace environment is based on the notion of simulated generations of difference. Cyberspace seemingly represents a state of sheltered imagination that can be turned on or off at the click of a button. However, Marie-Laure Ryan and later works of

Baudrillard contend that virtual reality (VR) will continue to redefine the boundaries of artificiality. Ryan asserts that:

> The worlds created by VR promise to outdo Disneyland in their combination of lifelikeness and artificiality. In the recent work of Baudrillard, VR has indeed displaced Disneyland as allegory of addiction of late twentieth century culture for the hyperreal. (90)

Baudrillard uses the word "addiction" when describing our desire for the virtual. Many individuals become consumed by technology and begin to forget about the outside world. The problem is exemplified in the works of individuals such as Brenda Laurel who believe that "computer simulations offer the opportunity of taking your body with you into the worlds of imagination" (Ryan 91).

The problem with Brenda Laurel's statement is that current technology does not allow for bodily immersion. It would be more accurate to state that the computer is incorporated into the world such that it becomes unnoticeable. This is known as ubiquitous computing, where computers are not only represented in personal computing devices but are imbedded in the social woodwork.[6] For example, bank machines have replaced the bank teller thus enabling a machine to accomplish the work of a person. The incorporation of the technology over several years has allowed the machines to become the main source of banking where as

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[6] For more information on ubiquitous computing, see: http://www.ubiq.com/hypertext/weiser/UbiHome.html

the human teller is often an afterthought. In this case the body becomes secondary to the technology as the bank user favors the convenience and the speed of machine mediated financial access.

Computer mediated interaction is one of the focal points for Steve Mann and his wearable computer. For Mann, the computer is a component of his body and it is an integral part of his everyday life. Mann's development of his wearable computer has allowed for the incorporation of his body with a computer, camera, telephone, and videophone, thus forming a single entity (5). His original intention was to "alter and extend personal reality through the use of technology"; however, his intentions changed and he "became concerned with the more general issue of personal autonomy in an era of increased automation and ever-more visible technologies" (6). What is important to note from Mann's experiment is that the body is susceptible to a difference in interaction once a computer is involved. The wearable computer changes Mann's perception of his interactions and encounters because they are mediated by a machine. This could be described as a form of virtual reality but it is possible that our simple engagements with technology, such as the bank machine, are creating a type of virtual reality, one that minimizes the significance of the body through instant tellers. Therefore, it is possible for us to "permanently interface with the

machine," as long as "we retain our awareness of how our choices will affect ourselves and our world" (7).

In light of Mann's experiment, it would be more accurate to represent current virtual technologies, such as the personal computer, as a window. The user looks into the screen and sees a myriad of objects, actions and images. Immersion into the system comes via the mind, as the perception is one of, say, "going" on a virtual tour. The user selects items and is asked to proceed to a checkout. The belief is one of participation or interaction in a process of "going" shopping. The selected items appear to be taken from the virtual shelf, placed in the virtual cart and taken to the virtual checkout. All the while, the user is convinced that the body is moving along in the process because the virtual attempts to parallel the physical shopping experience. In this case, actual body presence is confused with pattern thus creating the perception of shopping (Hayles 48). Because there is an associative pattern involved when shopping, the replication of pattern in cyberspace enables an embodied shopping experience. Therefore, cyberspace could be seen as a system that creates a familiar environment for the user by using specific patterns and language that relate to everyday experience but is not true of physical immersion.

Notions of familiarity are created by language and it could be argued that our physical immersion is defined by language, so the body is language. As Pierre Lévy explains:

> Without language we would be unable to ask questions or tell stories, both are ways of detaching ourselves from the present while intensifying our existence. Human beings can partially detach themselves from current experience and remember, evoke, imagine, play, simulate. By doing so, they travel to other places, other moments, other worlds. (92)

Language, according to Lévy, allows us to identify the body at a particular time and place. However, cyberspace creates the potential for a bodily experience that has not been known. For example, if an individual has seen all of the significant landmarks in Europe on the web, could they then say that they have experienced these landmarks virtually? Virtual experience leaves the user with the illusion of physical/immersive interaction. According to Lévy, the user perceives of a "metamorphosis and recomposition of bodily function" attributed to "the technological object as an agent of virtualization" (96).

The image and function of the body in the virtual world is altered in the state of virtual reality. In *Possible Worlds*, Ralph Schroeder explains how the body is important to the construction of a virtual environment. The body needs a "presence" in order to truly understand the depth of the environment visited (59). Schroeder explains various experiments of subjects where their experiences of the virtual are monitored. The subjects are equipped with special glasses and gloves and they are asked to interact with the digitally created objects in the room. The participants then play a form of table tennis in the virtual environment. What the

study found was that participants felt the benefit of having some sort of spatial orientation during the game. Also, the players found the gloves and glasses to be a nuisance[7]. What this experiment shows is that our virtual technologies are not up to the standard of the imaginary *Star Trek* Holodeck. Also, the experiment displays the need to maintain bodily presence in the virtual environment. Our current cyberspace system maintains an association with objects like "desktops." Further, our associations with technology allow for a continuous search for contextualization of the body in cyberspace.[8]

The cybernetic or altered body is a focal point for various cyber-theorists such as Dani Cavallaro and Donna Haraway. Cavallaro's cyberbody stems from a relationship that is biologically and technologically based with no clear boundaries (72). Both biosociality and technosociality are two notions that are used in order to describe the body as a fluid entity in cyberspace. Biosociality is "the inadequacy of the principle of finitude, according to which humans are neatly bounded, by highlighting the instability of matter and form (72). Cavallaro is emphasizing that nature is always in a process of creating biological differences or shifts to create different entities. On the other hand, technosociality is defined as the merging of nature and technology in a

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[7] Experiment performed by Mel Slater at Queen Mary and Westfield College in London. Further experiment details can be found on pages 58-68 of Ralph Schroeder's.
[8] The contextualization of the body in cyberspace is developed in a later example of *Snow Crash* (Chapter 4).

shared environment (72). As was described in the earlier virtual experiment, we are in the process of inscribing the body within an electronic system.

Bodily inscriptions in cyberspace are complicated by a technology that appears to amalgamate previous distinctions of the natural and artificial. Donna Haraway believes that:

> Late twentieth-century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines. (152)

Haraway and Cavallaro are describing a system of technological attachment where the body is inscribed with technological devices that can enhance, but at the same time complicate the traditional notions of the body and its role in the natural environment.[9] The benefit of cyberbody analysis is a further invitation "to address fundamental questions about embodiment and about the body's relationship between space and time" (Cavallaro 78).

The word embodiment is significant when discussing cyberspace because it can represent a variety of different perspectives. The metaphor of embodiment can be used "to explore ways in which we notice the world, acquire knowledge, make informed decisions, and act our perceived roles in society" (Wood 1). It is possible that emerging

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[9] See previous example of Steve Mann and the wearable computer.

technologies and bodily interactions with technology help us to gain a greater understanding of our surroundings and ourselves. Conversely, it is possible that "embodiment differs from the concept of the body in that the body is always normative relative to some set of criteria" (Hayles 196). The notion of embodiment is always in a state of flux depending on the instantiation of the term. Because the notion of embodiment is linked to notions of society, race, culture, technology, etc. its meaning is constantly being redefined. Therefore, embodiment never directly coincides with the body even though it is normalized in this fashion (196). For this reason "relative to the body, embodiment is other and elsewhere, at once excessive and deficient in its infinite variations, particularities and abnormalities" (197).

It is also possible that embodiment signifies a human subject that "is more active and responsible for giving their lives meaning in relation to a more fluid and diverse set of cultural resources inscribed within the virtual space" (Blackman 133). In this case, technology would provide a more active bodily state. The Internet, for example and keeping with the previous analogy of cyberspace as a window, would provide a window into various other cultures. This is not a claim for visiting a site in Asia as an actual, visited experience. Instead, worldly experience and interaction is reduced because of technology. Because of technological innovations such as electronic mail and portable electronic devices, there appears to

be a greater opportunity for communication and acquisition of imagery from other countries, cities, landmarks, etc. The body, however, still remains stationary, absorbing the information that is provided through the window or screen.

It is quite evident that the body and its environment can be difficult to define and place in a specific context. Scholars such as Baudrillard give us indications as to the nature of simulation and the problems of identification. Cavallaro, on the other hand, attempts to display how the body changes over time in various ways. Other scholars provide insight into the computational altering of environments both textual and natural. Technology plays a significant role in changing and exposing the mechanisms of power/discursive relations through which we are constructed and construct ourselves (Wood 143). It is possible that the body is in the process of developing a sign-ificant other, a double identity composed of both natural and technological components. Our double is comprised of illusions and images that are created through simulation. In the hyperreal, our bodies appear to be in a process of becoming simply a representation of the real, like Disneyland; a collection of hyperreal advertisements and logos that create an illusion of "the real thing." The emergence of sophisticated, hyperreal-like technologies attempt to redefine the parameters of bodily interaction, experience and immersion in a digital, immaterial landscape. However, it is also possible

that various literatures have already prepared the user for a contextualization of the body that is outside of the traditional landscape.

Chapter 2: Literary Contextualization and Metaphorical Attribution

Both print and electronic forms of literature attempt to play on existing structures or commonalities between the user and the media. For Deleuze and Guattari, the text is an intricate structure complete with multiple contextualized meanings (10). George Lakoff and Mark Johnson believe that elements of metaphor dictate our perception of the body and its engagement with its surroundings (45). But it is possible for the body to become lost in metaphorical surroundings if the surroundings do not exist within a structure. For example, the textual body, because of its bound tactile properties, provides structure for its narrative. For Christopher Keep, the print medium provides a sense of familiarity and a level of comfort for the user (167). However, electronic texts such as hypertext attempt to provide a narrative without context or specific structure. Because of a lack of narrative structure, the hypertextual body is often analyzed as a collection of metaphorical bodily attributes that enable some form of definition and context. Without some form of corporal contextualization or metaphorical attribution, literary and electronic media would appear to lack meaning.

When the body of a text is defined there is an attribution of a specific subject or meaning. George Landow believes that Deleuze and Guattari's *A Thousand Plateaus*:

> Might provide a truer more efficient information technology, asking: What takes place in a book composed instead of plateaus that communicate with one another across microfissures, as in a brain? A 'plateau' is any multiplicity connected to other multiplicities by superficial underground stems in such a way as to form or extend a rhizome (39).

Deleuze and Guattari do not believe in a text that is singularly defined. They believe that once a text is categorized into one meaning, the reader will attribute a specific subject to the text; in turn, the text will be neglected for its surface meaning. The textual body, like the physical body, can be neglected and represented as something that has only one meaning. For example, a book could be categorized in a particular genre the same way the body could be classified by colour or external appearance. In both cases, the surface meaning can dominate the internal subject matter and or the perception of the subject matter.

Deleuzian classification based on surface meaning is represented as a *tige souterrain*, translated as the stem of a plant's roots. The roots of the plant or rhizome, is indicative of a parallel progression or growth that occurs between 1) an individual, 2) print or electronic media and 3) the external world. Further, the internal textual and physical bodies can be represented as plant roots because they are branched and de-stratified. The rhizome "connects any point to any other point, and its traits are not necessarily linked to traits of the same nature; it brings into play different regimes of signs and even non-sign states" (Deleuze 21). Deleuze and

Guattari believe that true multiplicity cannot be achieved if multiple meanings are not attributed or conceived of within a specific context. Therefore, multiple meanings or bodily attributes for both the textual and physical body cannot be achieved without some form of contextualization.

Deleuze and Guattari create the image of the textual body as a "literary machine" one that is comparable to "a machine of war, love, revolution, etc. - with one abstract machine that carries them" (10). The literary machine or textual body is built from numerous personal elements such as experience, fantasy, literary exposure, academic training, etc. Because there are numerous factors involved in building a text, the text represents a form of memory that is filled with "discontinuity, ruptures and multiplicity" (Deleuze 24). In terms of physical memory, our long-term memories appear to be hierarchical, for the most part, because of a need to prioritize series or sequences of events based on priority; it is also a form of memory that deals with family, race, society or civilization. It is not instantaneous and everything that it translates appears to be at a distance. In this case, the Deluzian literary machine could represent both the physical and mental interactions that structure our experience and our expression of experience through literature.

The analysis of bodily interaction and electronic media is important because of the alternate inscription or representation of the body. Jeffery Fisher contends that electronic media attempts to contain memory through institutionalization and a conscious removal of the body. Fisher explains:

> In connecting body and memory, it sets up a medieval mirror for the will to virtuality; whereas bleeding as a medical practice is an attempt to remove illness and discard it, leaving the body purified, virtual bleeding aims to extract pure personality and discard the body. (113)

The emergence of electronic forms of media attempt to draw on a variety of contextual elements that enable an association with the user. In terms of memory, computational forms of media, such as hypertext, would appear to accommodate short-term memory because of its fragmented and ever evolving nature. Long-term memory and media relate only when we place the context of the media within one or many of our broader perceptions of family, race, etc. Without some form or context, either abstract in the case of Deleuze and Guattari's rhizome, or tactile in the form of the codex book, definition and categorization is difficult if not impossible.

Although there have been relatively few changes with the form of the codex book, postmodern novelists attempted to redefine accepted narrative realities. The postmodern novel attempts to create the illusion of indefinable reality and nonlinear reading. The text appears to be more

fragmented in its construction but it is still bound and confined to the physical, definable properties of the codex book. Hubert Aquin's *Trou de mémoire* provides the example of a redefinition of traditional footnote authority as his characters write footnotes to the reader. The reader is directed to a footnote that influences the transition and flow of the text. One could argue that the text itself is still being read in a linear fashion but the footnotes themselves form a shift from a traditional linear reading to a form of nonlinear reading. Other texts such as Michael Butor's *Transit* redefine linear reading as the text is read from front to middle, while the remaining half of the text must be turned over and read from the back to middle. If it is the case that the text is always immaterial, allusive and intertextual, then any textual body cannot be singularly defined. However, electronic texts, such as hypertext, appear to push the boundaries of fragmented construction and attempt to further re-define the definable.

Hypertext is described by Ilana Snyder as "a means of arranging information in a nonlinear manner with the computer automating the process of connecting one piece of information to another" (ix). The process of connection is accomplished through a connection of nodes in a cybernetic or computational environment. Marie-Laure Ryan describes hypertext as a mode of nonlinear reading where a textual fragment is linked to another textual fragment offering the reader a choice of

directions to follow (6). The premise of hypertext is an environment that offers the reader a variety of options. Scholars such as George Landow and Richard Lanham believe that textual conversion, in the form of hypertext, grew out of dissatisfaction with the related phenomena of the printed book, hierarchical thought and singular categorizations of texts (Snyder 39). Others such as John Unsworth believe that electronic texts have "profound implications, implications that are ethical and philosophical, economic, formal and generic, legal, and – sometimes overwhelmingly – practical and procedural" (1). Unsworth believes that there are various issues with hypertext that must be addressed before implementation. The most important of these issues appears to be a fear of depersonalization and subjugation to the mechanical.

Prevalent fears can arise when discussing the idea of shifting from a textual body to linked, electronic texts. Rob Shields discusses the issues involved with hypertext linking, specifically the link itself. Shields' creates an image of the web as a "bricolage of distinct images" (151). Like a text, the linking between pages is "both a part of the text and an index caught on the threshold of departure signaling to another page or text" (151). The link itself is a representation of what is to come and is endorsed by the author of the hypertext. In terms of semantics, Shields believes that hypertext links draw connections between specific things or elements as a way of forging semantic relationships (152). It would seem that Shields'

assertion of semantic linking is correct because hypertext links may enable false, non-relational connections or connections of convenience. The issue then becomes the types of relationships that are formed. At times, the user is unaware of the linking process and narrative direction and is subjected to the mechanical direction of the text (although there is a belief of free choice or an optional selection process). Because Shields believes that hyperlinks conform to the model of an index, he is describing hypertext as a linear system with specific connections and predetermined direction. Therefore, the reader is under the illusion of meaningful connectivity while being subjected to the direction of the author.

The re-configuration or re-conceptualization of the body through hypertext is discussed at length in Christopher Keep's article *The Disturbing Liveliness of Machines*. For Keep, hypertext ceases to be a site of fullness in its own right and it becomes an "extended space of production, a series of flows, energies, intensities, discontinuities and desires which refuse the enclosure of the normative body" (179). Keep exemplifies Michael Joyce's *WOE* as an instantiation of the body in cyberspace:

> You peer at a display, uncertain exactly what the map of light and shadow represents, then you notice the tube of your esophagus rippling with long swallows as you tip the stuff down your throat. You roll to your left side and the gritty image shows you an inert bag filled with liquid (112).

Joyce's *WOE* is a direct application of metaphors that represent the world of hypertext as a bodily journey. At times the hypertextual world appears to be suggested as "an inert bag filled with liquid." Since the environment is ever changing, the "liquid" or textual material is constantly moving or altering its shape.

A shifting of textual representation would enable a reading of an electronic text that "disturbs the act of reading" and at times "shapes and informs the readers subjectivity" (Keep 165). The example of *WOE* can be compared to Terence Harpold's notion that "the heart of the hypertextual corpus lies in its Pantagruelesque belly: the gullet, the stomach, the tripe – all knotted and labyrinthine forms of this heteroglot form" (165). The imagery of this quote persuades the reader to perceive of the hypertextual world as a form or process where all becomes digested and indistinguishable.

Although hypertext is a labyrinth of similar form, there may be a more accurate metaphor to describe the interactivity; it may be more accurate to say that the non-sequential reading of hypertext is like acupuncture in its behavior. For example, just as the selection of a specific pressure point in the foot activates healing in another area of the body, the selection of a specific "link" enables activity in another part of the hypertextual body. Enabling a specific action would indicate that there is a structure that is beyond a muddled, knot-like labyrinth. However, since

it is possible for the user to become lost in consecutive actions, the experience may become labyrinth-like. Therefore, while it is possible for hypertext to be described as a knot or labyrinth it is also plausible to represent hypertext as a somewhat organized collection of causal reactions.

Furthering the notion of the computer as a type of body with cybernetic organs is Keep's contention that "bodies, or more precisely, our different senses of inhabiting a physical self, are as variable as the texts that we read" (165). The physical process of reading and what it means to read is under attack in a hypertext system. In this case, the reader does not become the author of the text in a hypertext environment "as the reader has no *a priori* subjectivity that she brings to the screen" (165). There is no occupation of a specific space or time within a hypertext environment. As was previously mentioned, the hypertextual organs, unlike bodily organs, cannot and should not, by definition, be mapped and specified. Keep emphasizes the fiction of links and lexia that require a different engagement of the body; an alternate inscription in space with a variable relation to one's self and to others (166). Therefore, the inscription of the body in cyberspace is based on a creation of a cybernetic self; a body that is void of direct, physical contact.

Furthering Keep's notion of bodily hypertext is the example of Deleuze and Guattari's assemblage, comprised of two segments: content

and expression. Keep believes that "assemblages are opposed to all totalizing gestures" and that hypertext "does not constitute in its aggregate form a moment of completion" (179). However, individuals such as Michael Joyce envision hypertext as a system of literature where:

> "We are in the water, inscribing and inscribed by the flow in our sailing. We write ourselves in oscillation between the smooth space of being-for-time (what happens to us as we go as well as what happens to the space in which we do so) and the striated space of in-time (what happens outside of the space and us)." (qtd. in Cyberspace Textuality 41)

While this is a promising vision of hypertext technology, it is unrealistic. According to Joyce, the user would be defining bodily inclusion in a text in a similar fashion to the incorporation of the body in a natural environment. While Keep's point of view is valid, it is difficult to perceive of a complete enclosure of the body. He contends that the normative body will "get lost" in a hypertext environment. Essentially, Keep believes that if a reader becomes mentally immersed in a novel, he or she has enclosed the body into the narrative. Granted, it appears to be much more difficult to get lost in a print narrative but the debate remains over the apparent de-naturing of human beings in a hypertextual system. While the engagement of the body may be varied from the process of reading a linear text, it may not be a direct immersive experience. Rather, it could be a reference to metaphor that ultimately dictates our physical, immersive experience in hypertext.

George Lakoff and Mark Johnson examine the bodily metaphor extensively in *Philosophy in the Flesh*. One particular section discusses the inevitability of "Primary Metaphor." Primary Metaphor is described as a "minimal structure that arises naturally, automatically, and unconsciously through everyday experience by means of conflation, where cross-domain associations are formed" (46). Primary Metaphor emphasizes an encounter with a variety of metaphors through everyday experience. Thousands of connections are made unconsciously and provide what Lakoff and Johnson call an inferential structure (57). The inferential structure is a continuous metaphorical connection that is made though experience until a type of subconscious structure is formed. This structure involves 1) a subjective experience, 2) a sensory motor experience, 3) a metaphorical example and 4) a related primary experience. One example that can be related to the use of body metaphor when moving through hypertext is based on the idea that actions are "self propelled motions" (49). This means that a metaphor of movement is based on a collection of experiences that dictate our use of that metaphor. In this case, the inferential structure for a metaphor of movement would look as follows:

> **1) Subjective experience=** Action
> **2) Sensory Motor Experience=** Moving your body through space
> **3) Metaphorical Example =** "I'm *moving* right along on the project."

> **4) Primary Experience=** The common experience of moving yourself through space especially in the early years of life. [10]

The previous example is a sequence of understanding that is instantiated the first time an individual attempts to move. Lakoff and Johnson would likely agree that hypertext represents a cross-domain association where the user is believed to be physically moving from link to link, actively participating in the creation of the narrative. However, it would be more accurate to state that the user is relating metaphors to movement through the text as opposed to a physical embodiment of the text. Therefore, the movement that is taking place in hypertext or cyberspace could be related to a primary experience of physical movement as the user "moves" from link to link.

It is also possible to argue that various forms of metaphor, specific meanings, and representations are mapped onto the body. Allucquere Rosanne Stone's notion of "warranting" is an example of instantiating bodily structure and physical meaning through discourse (138). "Warranting" represents a desire to create a specific body, described as the citizen, through attributes and meanings. The citizen is composed of two major elements:

> The collection of physical and performative attributes that Judith Butler and Kobena Mercer in separate works call the culturally intelligible body and the collection of virtual

[10] For further examples of Primary Metaphor see *Philosophy in the Flesh* (pp. 49-54).For more information on Primary Metaphor and subjective experience see Chapter 4 of *Philosophy in the Flesh.*

> attributes which, taken together, compose a structure of meaning and intention for the first part, primarily through discursive means. (Foster 139)

In this case, Foster would likely agree with Lakoff's contention that the production of the citizen is formed through disembodiment. It is possible that history provides a context to understand the changes introduced by new technologies, computer mediated tools of communication and media such as hypertext. However, history embodies certain elements of comfort. For the literary scholar, the text is a familiar medium that comfortably embodies notions of culture, language, environment, the body, etc.

Christopher Keep's conceptualization of the body reveals a longing for a print medium that is comparable to "an infant's sense of security and belonging, for the warm and safe environment prior to our inscription in the symbolic order, of which, paradoxically, the book is an eminent sign" (Keep 167). Keep wants us to believe that "a book can be finished and it allows one the sense that it has given itself over completely to the reader, surrendered all its secrets" (167). This vision of a book surrenders to the dominance of the reader; it is a textual body that can be analyzed, dissected and overpowered. Because Keep chooses to ignore some of the complexities of the computer generated text, he presents hypertext as a frightening new territory that cannot be dominated by the casual user. The assumption is that all readers will be able to unlock the

secrets of every novel. While many users may not be able to fully grasp the novel in its entirety, it is important to note that a book provides a sense of completeness that a hypertext does not. Therefore, the hypertext user does not always have a sense of fulfillment that comes with the completion of a physical text.

Keep evaluates the hypertext system as an unsilvered looking glass that stymies the subject's narcissistic desires (169). While this may be the case, it is important to note that the narcissistic desires of the computer programmer, for example, are fulfilled when the application or programs of a computer are actualized. Because Keep may not fully understand the complexities of cyberspace and computer language, the unfamiliar working space is a place without warmth, security or symbolic order. Because hypertext is compiled through a shifting of texts on a computer screen, at times it can appear to represent an inaccessible and remote environment; it provides none of the tactile pleasures of the bound volume. It is as though the words in a hypertext system are placed "in a virtual space where they shine back at us with an uncanny light all their own" (Ryan 170).

Hypertext is different from the codex book because it allows the reader to explore the text from passage to passage in a nonlinear fashion. In some instances, a "hypertext blurs the boundaries between readers and writers" (Snyder x). The reader is presented with what might seem to be a

more fluid-like representation of the textual body. However, current hypertext poetry, for example, limits the reader to the predetermined links constructed by the author. While printed text can be bound, touched and held because of its physical properties, hypertext is a system of non-tactile connections that cannot be maintained as a physical representation. Hypertext is a virtual representation of the text. Keep would likely agree with Snyder because he does not envision the virtual space as an environment for a text that is founded or rooted in realism. It is a vision of a text that conforms to the reader and it is a world where the reader dominates the narrative. For example, the literary scholar maintains a certain amount of dominance over the printed text through a development of skills that enable textual manipulation and comprehension. What Keep fails to mention is that the computer, like the text, can be manipulated in a similar manner. Scholars in Humanities Computing, for instance, might be able to better understand the inner workings of the technology and the literature, thus being comfortable in their ability to understand and manage cyberspace.

Comfort and accessibility of the contents of a novel create a relational environment. The reader can relate to the content of the novel or hypertext if the content has some personal meaning. In this case, the reader feels as though a bodily connection is taking place. Keep however, believes that the hypertext environment, while it does have value, can

never be understood in its totality because it is not an inhabitable environment (22). However, users of computer technologies may become more accustomed to the interface thus relating to it as though it is a habitable environment. George Landow believes that hypertext could "provide an infinitely re-centerable system whose provisional point of focus depends upon the reader, who becomes truly active" (11). However, Keep does not believe in hypertext as a kind of triumph of humanist individualization. Instead, hypertext is a system where we "are not the masters of the text, but collaborators in its writing, participants in the process of our own becoming" (80). Although this is a promising approach to hypertext, there is no greater participation in this system than in the writing of a novel. The hypertext author determines the course of action for the reader and alternate pathways are presented in the narrative. While the user is encouraged to believe in narrative participation, the pathways are predetermined leaving the user with only a misguided sense of authority and physical involvement.

Participation in writing often involves an authorial desire to perpetuate the feeling of immersion in the narrative environment. Because a human being experiences an environment through the body, it has a profound effect on our notions of interaction and identity. Tasmin Lorraine believes that:

> Whatever one's politics or beliefs about what it means to be human, the specific body one inhabits inevitably affects the path one's life takes. Our bodies have social significance with which we are forced to come to terms. They enter into our senses of identity, the ways we behave, and the ways we interact with others. (2)

There are various levels of bodily interactivity and the body plays an important role in our understanding of literature, technology and our experience. Texts and hypertexts attempt to incorporate the body and its metaphors in order to create a sense of connection with the user. Literary theorists, historians, sociologists, anthropologists, and philosophers, among others have tried to account for the variety of ways in which the body has been represented (Lorraine 2). Bodily representation is significant because a greater mapping and understanding of bodily processes allows for a better understanding of various technologies and how they will influence our bodies over time. Because our bodies are constantly changing, forms of media that are believed to adapt and change, such as hypertext, will be under intense scrutiny.

The presence of the body in both the textual and hypertextual environment represents a desire for structure and context. In the case of hypertext, it is paralleled with the body in its fluidity and its ability to grow and develop over time. At times, there appears to be an overly optimistic or equally skeptical view of hypertext technology. However, it is important to note that both texts and hypertexts also embody similar

attributes of growth and development. The instantiation of bodily metaphor provides a relational context and basis for the user. Even though this contextualization can ease some fears of usability and detrimental bodily determinism, some will continue to question the benefits of the system on the body. The fear of the technological unknown is often driven by skepticism of change. This technological unknown will enable an understanding of the changes that are taking place and their affects on the body. A quick dismissal or acceptance of hypertext is equally unproductive in attempting to understand how the body is affected by its textual and hypertextual incorporation.[11] The analysis of the specific literary and cinematic instances of embodiment will create a context for a greater understanding of the incorporated self.

[11] The notion of bodily incorporation is discussed in Chapter 4.

Chapter 3: Literary and Cinematic Connectivity.

In literature, the bodily metaphor and the physical depiction of the body are imperative to an author's conceptualizations of the characters and the plot. Evidence of metaphorical embodiment is realized through an author's ability to construct the image of the body and its effect on character interaction. In many instances, it would appear as though the author is encouraging the reader to realize the work of literature as an embodied structure. For example, the novel *Jane Eyre* emphasizes the importance of the eyes in Charlotte Bronte's depictions of her characters. Edgar Allan Poe's *The Tell Tale Heart* focuses on the ears, eyes and heart as a driving force in one man's madness. Horror and madness, in relation to the body, are often complimentary in the fictional writing of Stephen King. Further, total body analysis and construction is found in Mary Shelley's *Frankenstein* and in a hypertextual adaptation of *Frankenstein* by Shelley Jackson entitled *Patchwork Girl*.

In all of the above examples, the body plays a significant role in the actions, reactions and circumstances of character interaction. The awareness of the body that exists in literature reflects the ideas of the author, its fictitious composition and the notions of the body and its functions. Furthermore, fictional literature and film attempt to create a context for the computerized body and a cybernetic body. For each literary and cinematic representation of the body, there is a parallel

drawn in cyber theory. In many instances, human characteristics are attributed to computers in order to gain a greater understanding or relation with our own body.

The psychoanalyst Martin Gliserman comes to understand a work of literature, such as a novel, as a form of embodiment. According to Gliserman:

> A novel is a sustained imaginative experiential (interpersonal, social, psychological, political, historical) linguistic artifact. Inevitably, when a person authors such an artifact, the body that is embedded in language will become embedded in the text with the personal signature of the author. (1)

Gliserman contends that the author places a physical mark on the novel. A further claim can be made that the reader is engaging in a parallel, bodily encounter between the author and reader. The reader is exposed to the physical extension of the author through her use of language and structure. Language is therefore presented as something physical that creates and shapes the bodily image in the text.

Gliserman's textually inscribed body "lies inside the language, like a seed in its shell, waiting for a medium in which to germinate" (2). The novel represents an environment where the body lies dormant until the reader engages the text. The reader begins to envision, through the creative vision of the author, the physicality of a character. How much or how little is known about the character is determined by the physical

construction or make up of that character. Gliserman believes that the novelist constructs a particular language map that "contains traces of the writer's body needs, desires, fears and histories which mirror ours or allow us to reflect them" (2). How weak or strong the connection between the storyteller and reader depends on the effectiveness of the authors bodily depictions. However, other connections based on culture, language and general information could also dictate a connection beyond the body.

The perception of connectivity is paramount when analyzing and comparing the text and cyberspace as environments of engagement. William Gibson coined the term cyberspace in the novel *Neuromancer* to describe the interaction of the human user with the computer interface or matrix as he calls it. Michael Benedikt's definition of cyberspace states the following:

> Cyberspace is a new universe, a parallel universe created and sustained by the world's computers and communication lines. A world in which the global traffic of knowledge, secrets, measurements, indicators, entertainments, and alter-human agency takes on form: sights, sounds, presences never seen on the surface of the earth blossoming in a vast electronic light (29).

The important element of Benedikt's statement is that cyberspace is a world where an alter-human agency takes form. At first glance, the environment of cyberspace appears indefinable. However, bodily properties are associated with the computer in order to dispel the myth of an alter-human agency. For those individuals who are unfamiliar with the

parameters and complexity of cyberspace, computer components take on personal attributes. One example could be the naming of a computer thus enabling a fictitious, personal relationship. Another example is the user that believes in what could be called computer karma, where the computer intentionally crashes or works improperly because it recognizes the user. In this way, the user is more able to relate to the technology on a physical/personal level. Just as a novelist constructs certain language maps, so do the users who attempt to define cyberspace. The virtual body image is often associated with the human interaction or connection with the computer. There is a certain degree of anthropomorphism attributed to a computer and some individuals personalize a computer to the degree of 'friend,' 'work companion' or even 'lover' (Lupton 478). However, there are other users whose computer interaction is similar to the connection that a reader feels towards a fictional tale or character.

There are various levels and forms of interaction that occur between the author and the reader. Some writers are concerned with "the bodily inscription of social markers such as gender, sexuality, class, race, ethnicity and age" thus placing the body within a specific, pre-determined context (Cranny- Francis 112). However, the body that is found in a text is continuously changing based on the time and perspective from which it is read. An author's intention to depict a body

in a specific fashion may inadvertently change over time depending on who reads the text. It is possible that:

> The popular texts of everyday life, as well as the theorists who critique both everyday life and its texts, work to detect and to define those potentialities and possibilities made available by changing social and technological conditions. (Cranny-Francis 113)

It is through constant analysis and evaluation that a text is analyzed to the point of reconstruction. The process of reconstruction allows for a fragmenting and assembling of the initial "body" of the text. Gliserman would argue that "detecting and defining potentialities and possibilities" leaves the physical body of the work unrecognizable and outside of the author's intentions. Cranny-Francis would likely agree with Gliserman, that the body is often the central figure in the novel and that it can appear in "image and symbol, overtly and implicitly, in name space and syntax. And it shifts from one manifestation to another" (56).

Cyber theorists, such as Anne Balsamo, have reconceptualized the body in terms of emerging technologies. In a similar fashion to the novel, cyberspace is an environment where the body can shift from one manifestation to another. However, according to Balsamo the material body as a bounded entity has changed due to the appearance of the virtual body (497). The virtual body is expressed as the body that emerges in a virtual or cyberspace reality. The cyberspace reality promises a technology that would outdo Disneyland and its contribution to likeness

and artificiality (Ryan 90). A shift in bodily manifestation is attributed to the cyberspace or Disneyland- like environment; a human constructed environment that is comprised of mechanical animals and puppet-like humans. Like Disneyland, cyberspace is an environment of information and encryption where the structural integrity of the physical body is technologically deconstructed (Balsamo 479).

Cyberspace, like the fictional novel, is a world of imagination. Computer simulations offer the opportunity to take your body with you into a world of imagination (Ryan 91). However, as Brenda Laurel argues, the virtual world is controlled by rules, is created by man, and is immaterial (91). Because the virtual world or world of cyberspace is artificially created, Laurel believes that it will not be able to accurately recreate a realistic environment for the body. Thomas Laudel, an engineer, believes that virtual worlds will be composed of "emergent" behavior (91). If Laudel's contention is true, the virtual world would be able to recreate and adapt on its own once the initial programming were completed, thus creating an adequate environment for the body.

Shifts in bodily understanding between different media are important in the construction of the body in the novel. A modernist perspective of the novel emphasizes a body that "must be a source and a locus of meanings, and that stories cannot be told without making the body a prime vehicle of narrative significations" (Brooks xii). However, it

is uncertain as to whether the text is a direct representation of the body or the body a direct representation of the text. Interpreting a statement that Roland Barthes makes about the structuring of a text as the object of the human body, Brooks believes that:

> Meaning, especially meaning conceived as the text's self-representations; its representations of what it is and what it is doing takes place in relation to the body, and that we are forever striving to make the body into a text. (7)

At this point, it is important to note the difference in tone between Brooks and Gliserman. Brooks, like Barthes, believes that the body is something that the author is striving to embed and preserve in the text; that the act of writing is a continuous process that allows for bodily representations. Gliserman, on the other hand, believes that the act of writing a text is a form of creating an extension of one's body. He believes that we are not striving to make the body into a text because the act of writing is our physical extension. The body, for Gliserman, is embedded in the text and it can only be fragmented and altered if the physical text becomes disconnected from its original source. Therefore, it is possible that the author is in the process of inscribing his or her body in the text. This inscription creates an intimate encounter for the reader and it enables a sense of understanding of the textual body.

In the same manner that Barthes describes forever striving to make the body into a text, a new onus may be a desire to make the body into a

technological entity. This emerging cyberbody stresses a relationship that is biologically and technologically based with no clear boundaries (Cavallaro 72). Both biosociality and technosociality are two notions that are used in order to perceive the body as a fluid entity in the cyber world. Biosociality "emphasizes the inadequacy of the principle of finitude, according to which humans are neatly bounded, by highlighting the instability of matter and form" (72). For example, nature is in a continual process of creating biological differences or shifts to create different entities. On the other hand, technosociality merges nature and technology in a shared environment and has the potential to create a model of multiplicity outside a unitary physical body (72). What is significant is the connection that is made with the inscription of the body and its textual similarity. A text, through the vision of the author, may attempt to push the boundaries of the physical body. Because of emergent technologies, academic concern has focused on the inscription or incorporation of the body on an electronic canvas. The bodily manifestation appears as an inscription of a semantic unit (the complete body) or as a semantic network (a connection of bodily parts or functions).

In terms of textual representation, Deborah Harter's *The Body in Pieces*, is concerned with bodily deconstruction in nineteenth century literature. Harter is focused on the genre of the fantastic narrative, one that lures protagonists and unsettles readers not from the supernatural

but from the substance of some familiar domain (8). The familiar is based on the reader's connection to the bodily descriptions of the characters. The intrinsic nature that is common to all readers of literature is the body. The reader creates a link with the text because she can conceptualize what a fantastic bodily expression might look like. Harter believes that there is an array of body parts that tantalize and remain detached but there are also bodily wholes that are threatened by dismemberment (129). The author makes a conscious decision to incorporate the bodily image as a complete entity or a selection of fragments. In texts that can be described as fantastic narratives, "in story after story, and with a kind of synechdochic fury, the body is captured and contemplated through its severed hands, its beating heart, its lost meshes of hair"(3).

Harter uses various examples, from Maupassant's novella "La main," where a skeletal hand is seen to "gallop" across the room, to Poe's short-story "Tell-Tale Heart" with its beating heart and vulture eye (3). These examples illustrate a functionality of the body that, at times, goes beyond the reader's expectations. There is a significant relational aspect to the "galloping" hand and the beating heart. The reader can identify with a notion that the body's extremities sometimes seem to act outside of our control. In this case "if the body is not one fixed 'thing', but many possible 'bits' of things, the opportunities for play and experiment become virtually endless" (Cavallaro 13). For Maupassant and Poe, a fragmented

body presents a sense of fear and anxiety in the reader. While the reading of the text may be fun for the reader, the fragmented body may be an author's subtle reminder or warning against a body out of control.

Bodily functionality and fragmentation are important elements in the analysis of cyber theory. Many scholars such as Matthew Causey focus on the future of computer networks interfaced with the human subject (184). For Causey, performance and functionality describe the interaction that occurs between the human and the computer. Causey contends that Human Computer Interface (HCI) dictates the production and the aesthetics of virtual spaces (184). The interface must represent a series of commonalities that will successfully accommodate the body. Similarly, the human/textual interaction dictates the writing and inscription of the body. The text is written in such a way as to provide a certain amount of comfort for the reader, a sense of familiarity. However, the difference between the textual interaction and the virtual is the appearance of an eventual joining of human and machine. The human can only perceive ideas of a novel whereas the world of cyberspace is intended to be physically immersive.

It is possible to argue that a fluid, cybernetic environment is fictitious and that virtual reality will never go beyond a body suit and goggled virtual reality. However, "for literally millions of users, cyberspace already "exists" as a *place*, as real as the work and play

conducted "in" it (Nunes 61). One example could be the decision by a California prison to ban prison inmates from downloading any material from the internet, receiving e-mail from family and friends or surfing the web.[12] This example represents a desire by the California State Prison to limit a prisoner's access to "work and play." Because cyberspace creates the illusion of travel and physical contact, a prisoner might feel the same connection to society as a home or office based web user. In this case, the body may appear to be disconnected from society, confined to a prison, but it would more accurate to assert that the body is engaging in metaphorical movement. Therefore, the user works and plays as Nunes' suggests, but it is only a place of movement in the sense of metaphor; the body experiences a similar disconnection with the novel.

A textual representation of connection and disconnection of bodily representation is often found in the horror novel. One horror author, Stephen King, uses the body and its imperfections or inconsistencies to evoke bodily relational fears. Stephen King is an author who "exploited fear in a way that charged the medium of print and transmitted directly to the body, hence to the visually and electronically literate" (Badley 1). Because Stephen King can relate the body to the reader, there is a connection that is created between the written and the physical

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[12] For more information on the landmark court case against the California state prison restrictions see: http://www.aegis.com/news/re/2002/RE020814.html

manifestations of the body. Stephen King's writing puts front and centre a body that is fragmented or can be picked up in pieces (Badley 45). King's inscriptions of the body have taken various turns throughout his novels.

One of King's novels, *The Body*, is focused on the search for the body of a young man. One of the boys describes his displeasure with the decaying body and rejects the idea that anything about it could be natural and pushes it away in horror. The boy declares that the sight of death is unnatural and therefore disconnects himself from the thoughts of death. The reader can relate to the boy and his reaction as many people choose to disconnect themselves from the idea of death. Furthermore, there is the possibility that when the boy denies death, he is also denying his own body. He consciously becomes disconnected from the thought of death and the inevitability of bodily decay. Therefore, while the author brings the element of death and bodily decay to the attention of the reader, there is also a magnification of bodily awareness.

Bodily connection, interaction and weakness are fully examined in relation to emerging technologies. Stelarc's cyber theory constructs a human being from existing technologies in order to amplify the senses and actions of bodily functions. The text represents a collection of thirty-four points that attempt to deconstruct and analyze specific bodily attributes such as the hand and eye in order to show how easily the body is altered using technology. Like Stephen King, Stelarc uses death

imagery to describe the processes of the mechanized body. Stelarc believes that the advent of technologizing the human will lead to a world without birth or death:

> With fertilization occurring outside the womb and the possibility of nurturing the fetus in an artificial support system there will technically be no birth. And if the body can be redesigned in a modular fashion to facilitate the replacement of malfunctioning parts, then, technically there would be no need for death. (566)

In order to create terror in the reader, the representative body must be presented as both a whole and a collection of parts. Gliserman believes that the narrative body of a text can also be represented as individual semantic units and their connections, or as a semantic network (8). Gliserman argues that the analysis of the physical body can be accomplished by analyzing a specific bodily component in a text. He provides various examples to support his point, one of which is the significance of the eyes in the novel *Jane Eyre*. Gliserman believes that Charlotte Bronte has constructed the eye as the focal point for the entire novel. He states that:

> The eye is the dominant bodily focus, written even into her name. The eye is named and often repeated; the scope of its semantic network is impressively extensive . . . Bronte's focus is on seeing and not seeing; being seen and not being seen; showing and hiding, keeping secret, disguising and masquerading. (84)

Gliserman provides an extensive and convincing argument for the "eye" as the representative of the "I" in the text. The reader is exposed to what

the "I" / "eyes" of the narrator and author express. The singular semantic unit of the eye is signaled in Bronte's representations of Jane's "glittering eyes of fear" or Miss Temple's "beaming dark eyes" (Gliserman 84). On the other hand, the perceptions of the characters are transmitted through the eyes as a semantic web or network. The way a character perceives of an event or another character has an effect on the overall atmosphere and feel of the novel. The emotional and visceral response of the reader in *Jane Eyre* can be attributed to the way the reader is seeing Jane's world through her eyes. It is as though the eyes are "the syntactic center, the dark pupil, of the novel is the place of the greatest, most embedded secrecy" (85). The eyes of the characters decode the secrecy of the text for the reader. In turn, the reader analyzes the text, and reads into the story to discover both descriptive passages and hidden elements of writing. However, in the case of *Jane Eyre*, the significance of the eyes resonates metaphorically throughout the novel.

Metaphorical significance is evident in Bronte's references of sight, observation and study. It is difficult for the reader to find one page of the novel that is without reference to the eye or its related functions (Gliserman 89). An encounter between Jane and Mr. Rochester emphasizes "an eye hollow and fixed, blank of meaning but for the glassiness of despair" (Gliserman 132). There are various other examples that support Gliserman's notions of the eye in Jane Eyre. What is

important to note in Gliserman's analysis is the overall context of "eye" and the "I" within the novel which can be attributed to a semantic network or connection of the body parts that affect the actions of the characters.

The semantic network can be described as specific references that connect one body part to another. In this structure, the concentration of the visual language leads to the description of the body and the perception of the self and others. The appearance of visual language, for example, can tell the reader "this is where the body is, called into existence, set into resonance, by seeing" (Gliserman 105). The eyes are used in directing the reader to the importance of what the characters are thinking. Visual interaction that is initiated in the narrative creates the ideas that shape both the character and the reader's perception of that character. Therefore, "the eyes of the novel have a variety of ranges. One range connects the eye to other organs, as when the eye is said to communicate something to or from the heart" (Gliserman 89).

The digital convergence of traditional media and the effectiveness of visual imagery in technology are important when understanding representation and expression. It is possible for a computer to enable a three-dimensional environment that provides the author with a more direct avenue of communication. However, textual representation allows the reader to internally conceptualize or visualize the body, whereas

technology creates an environment where the physical traits of the characters are already visible. Edgar Allan Poe's *The Tell Tale Heart* is an example of an authorial attempt to provide a visual representation of a madman through literature. Poe plays on the knowledge of the reader and coordinates the ears, the eye and the heart as triggers of madness.

Poe's tale of madness is centered on the body and the allegories that are often associated with bodily movements or actions. The tale is a first person account of an individual and his crime. Poe begins the tale by telling us that this character has such acute hearing that he can hear all things in heaven and in the earth and that he has also heard many things in hell (277). Immediately the reader is aware of the character's supernatural ability to hear everything but we are unsure if this is madness. His eventual confrontation with an old man appears to arise over the old man's eye. The man describes the eye and how it has consumed him:

> He had the eye of a vulture- a pale blue eye with a film over it. Whenever it fell upon me, my blood ran cold; and so by degrees, very gradually, I made up my mind to take the life of the old man, and thus rid myself of the eye forever. (277)

This quotation reveals the state of mind of the character before he kills the old man. He attempts to rid himself of the old man's eye that is later described as "his Evil Eye" (Poe 278). The madman is so consumed with the old man's eye that he spends his time looking in on him every night

only to ask him how he slept the following morning. It appears as though a simple ocular ailment, a deformity of the eye, is the source for the madman's obsession.

Bodily desire and obsession are essential to the description and motivation of Poe's characters. The reader bears witness to the thoughts and feelings of the madman. The madman is focused on the eye of the old man but the old man's heart is what leads him to further insanity. The madman's heart is personified as he "chuckled at heart" (Poe 279). The heart of the old man is said to make a "low, dull quick sound, such as a watch makes when enveloped in cotton" (279). The sounds of the heart persist in the consciousness of the madman as the "tattoo of the heart increased" (279). Poe is using a physical representation of a tattoo of a heart. The sounds and manifestations of the heart are tattooed to his mind; there is a sense of permanence. The sounds of the heart grow louder for this man and the man becomes concerned that the neighbors will hear this beating heart. The reader assumes that this is all in the mind of the madman; that this beating heart is becoming so pressing on his consciousness, it is driving him to action. Poe builds suspense through a normalcy of bodily functions as the reader is assumed to have a prior understanding of the awkwardness of an evil eye and the immediacy of a rapidly beating heart.

The attribution of complicated and sophisticated bodily functions, as a form of paranoia, is also a common application for the cyber writer and the cyber theorist. Films such as *Terminator* 2 and television series like *Star Trek* have exploited a public paranoia over emerging technologies and their effects on humans. The notion of the human-machine hybrid, and the reaction of the human, is presented in the film *Terminator* 2, which is based on a character played by Arnold Schwarzenegger who is a flesh-machine hybrid. According to Forrest Pyle, the cyborg film demonstrates that when a cyborg is created, there is a desire to make and unmake conceptions of the self (125). In a similar rhetoric of unity to the writing of Poe, the cyborg film attempts to show the audience what the body might become. What is interesting to note is how the cybernetic Schwarzenegger is constructed in relation to his human counterparts. In the first *Terminator* film, the Schwarzenegger character is sent, from the future, to kill the female character played by Linda Hamilton. However, the second incarnation of the film has the cyborg returning to protect Hamilton's son played by Edward Furlong. The interaction between the cyborg and the son is a key component to the film. Furlong's character engages the cyborg by instructing it on how to be more human. The cyborg is taught to walk in what is described as a "cool" manner. The machine is also taught about the nature of crying and what it feels like to have human

emotion. Because the cyborg expresses machine-like qualities, it must be taught the most primitive of functions: how to be human.

The desire to propagate technologized bodily functions is also found in the writings of Cynthia J. Fuchs. Her article discusses the ways in which popular film and television science fiction build suspense through an integration of a body and mechanical extensions (artificial eyes, heart, etc.). One of Fuchs examples is the appearance of the Borg in *Star Trek: The Next Generation*. The Borg are "a neosocialist cyborg community which is interconnected through bioengineering and other advanced technologies; they are androgynous humanoids" (Fuchs 281). Their bodies are composed of mechanical arms, computerized optical technology and metal casings that surround the body. The Borg, as their name suggests, are a collection of cyborgs that signify the unity of technology and the body. The main goal of the Borg is the complete assimilation of all beings they encounter into their collective. The Borg repeat a similar series of phrases throughout the episode: "Resistance is futile. We wish to improve ourselves. We will add your biological and technological distinctiveness to our own. Your culture will adapt to service ours" (Fuchs 282).

Although there are positive manifestations of technology in *Star Trek*, the construction of the Borg is used to frighten the audience into conscious thought about the use of technology. The Borg are depicted as

futuristic machines, scripted as a group of monsters that walk in a constricted fashion, looking to enhance their "collective" through the assimilation of all beings. Other aspects of the *Star Trek* television series deal with human characters that experience joy and satisfaction in their technological interactions. This is a positivistic view of technology, one that is based on:

> Lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints. (Haraway 154)

The positive manifestations of technological creation, such as Data the android officer in *Star Trek*, offer the opposing view of the monster, one that complements technological progress and curiosity.

Literary curiosity with altered and enhanced human beings is brought to the forefront in Mary Shelley's *Frankenstein*, which deals with the issue of the creation of an artificial human being and its interaction with society. Various scholars, such as Chris Baldick, have attempted to understand the effects of Shelley's writing of *Frankenstein*. In this case the argument is for a "range of readings which the novel has stimulated in modern criticism, in order to build up a picture of its special kind of mythopoeic 'productivity' as a generator of mythic possibilities" (33). The first element of examination is the assemblage and artificial creation of a human being. One of the most memorable and enduring features of the

story is that Victor Frankenstein assembles his monster from parts of corpses collected from charnel-houses and dissection rooms. Once the construction of the body is complete, the creator and all of the townspeople view the body as ugly and frightening. Even as the Frankenstein monster looks at his appearance in a mirror, he believes that he is ugly. Shelley's representation of bodily components and combination represent, for Baldick, the disorganization of nineteenth century society (35). For this reason, Shelley dramatizes a problem that extends to the philosophical, esthetic and political discussions; namely the question of the relation of the part to the whole (35). Today's dramatization of bodily components extends beyond physical assemblages to physiological and computational representations of the body.

The importance of a literary representation of a created human is apparent in cyborg literatures. Various references to the constructed body of *Frankenstein* are used in comparison with the cyborg. The perception of *Frankenstein* as a monster is the most frequent interpretation of cyberspace theorists. It is possible to argue that the *Frankenstein* monster is a precursor to any forms of cyber or science fiction. *Frankenstein* places its focus on the question of what constitutes humanity in a world that promises both opportunities for the advancement of human powers via science and dehumanizes people through technology (Cavallaro 2). The

importance of the novel in terms of science fiction is that the scientist, Victor Frankenstein, was able to create the semblance of human life from a collection of human remains: a representation or extension of himself. The text introduces the reader to an issue of tremendous ideological significance for science fiction, the potential for monstrosity in humanity, and thus articulates a deep sense of trepidation surrounding anything *other* (3). Sadie Plant, for example, believes that Shelley felt the stirrings of artificial life as industrialization began and she has been influential in the programming of the dreams and nightmares of the next two centuries (330). Shelley's novel also contributed to later forms of science fiction through her focus on the outcast and the physical differences of the other. Physical difference is apparent in the majority of science fiction such as the "documentation of scores of green little people, by *ET* and by the monstrous creatures of *Leviathan*, *The Fly* and the *Alien* series" (3).

The idea of monstrosity and physical difference in *Frankenstein* is expanded in Shelley Jackson's *Patchwork Girl*. Jackson's work is a hypertextual attempt to animate Frankenstein's female counterpart and allow her to narrate her own tale (Guertin 1). The text itself is a compilation of the monster's body parts. The user must navigate the body parts in an attempt to:

> Unrecord stories of women of the era; forgotten, faceless, unknown souls who each have their own histories, afflictions and 'monstrous' natures. Their memories jostle

> together just like their parts, and from the friction the creature's story is born. (Guertin 1)

This cybernetic recreation of *Frankenstein* represents a body that is not easily definable. As users interact with the text, they are interacting with a networked shape and bodily structure. Unlike other forms of hypertext, *Patchwork Girl* attempts to create a collective context as the user stitches/pieces together individual body parts (through hyperlinks) to arrive at a whole/collective body. While Mary Shelley attempted to create a sense of fear and distance with the fragmented body, Shelley Jackson enables a creative re-creation and detailed examination of the postmodern, hypertextual Frankenstein. In this case, exploring physical difference and alternate creation is encouraged as a means of furthering a personal understanding of the body.

Christopher Keep discusses the disturbing liveliness of the machine and how the cyborg theorist and fictional writer will often create a character that is completely anthropomorphic. Keep uses both *Frankenstein* and the *Terminator* as examples. He contends that the cyborg is imagined by the writer and filmmaker as subordinate to the mechanic, the animal, the other and the human (171). In this case, the cyborg possesses human attributes but is inherently and mentally secluded from everything from the basic machine to the complex human. The majority of cyborg films "represent cyborgs as aggressive bulging bodies. The

cyborg's physical prowess is heightened, not abandoned, and its strength is muscular not cerebral. What these cyborgs do best is kill" (Keep 171). However, there are some exceptions to the assertion that all cyborg's are killers. The contention that the cyborg is a bulging body is true as both *Frankenstein* and the *Terminator* are depicted as large, powerful bodies. However, *Frankenstein* does exhibit some traits that would suggest that there is some cerebral power. He has the ability to analyze his appearance and know that he is ugly. Because of the monster's self awareness, the reader feels compassion for the monster. *Frankenstein*, while large and powerful, appears to desire a companion and social acceptance. The *Terminator* is programmed to kill but also shows a desire to understand and learn. In *Terminator* 2, the audience is exposed to a cyborg that is designed to protect instead of kill and he appears to show some semblance of humanity.

The cyborg child, David, in Steven Spielberg's *Artificial Intelligence* (AI) is a machine that goes beyond showing elements of humanity. One of the taglines for the film reads as follows: "David is 11 years old. He weighs 60 pounds. He is 4 feet, 6 inches tall. He has brown hair. His love is real. But he is not."[13] AI is a futuristic version of Pinocchio, where the wooden child who longs to be human is replaced by a cyborg. David is an artificial child, a cyborg that is programmed with feelings and an

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[13] Other taglines for the film Artificial Intelligence can be found at http://imdb.com

uncontrollable love for his mother. In this case, the cyborg represents all of the enduring, humanistic qualities of a real boy. However, the parents of the adopted cyborg cannot accept the child as a real boy and decide to abandon him in the forest. Because of David's love for his mother, he strives to return to her in a seemingly never ending struggle to regain her love. This view of technology creates a level of sympathy and understanding in the audience as the child is seen to endure various hardships in order to be accepted as a human being. Therefore, the audience feels a sense of sorrow for a machine as they relate the cyborg experience to a lost child looking for his mother.

It is valuable to understand that the creation of characters such as *Frankenstein, Terminator* or *AI*'s David is motivated by humanistic desires. The author or scriptwriter is attempting to convey certain ideas about the human condition or the possibility of change to come. For some authors, the use of bodily metaphor and imagery creates a connection or bond between their textual body and the body of the reader. Similarly, virtual worlds such as cyberspace attempt to bridge the physical, immersive gap between the story and the reader. With the increasing notion of a direct avenue of communication through the virtual, more analysis will be needed to discover its bodily ramifications. It is apparent, however, that a continuous technological influence in society will continue to drive writers and filmmakers to a variety of bodily interpretations. It is

important to note that the fictitious ideas of a technologized body may act as a precursor or signal of our desire for the first technologically advanced human being. As long as the cyborg remains fictional and not actual, speculation will persist in the appearance and emergence of the cyborg in our writing and films. However, it is possible to argue that the cyborg has transcended literature and film and is instantiated in every computer user.

Chapter 4: Transcending the Body

The use of bodily metaphor can be interpreted as a desire by the author to connect the work to specific personal or social issues, an original source material, and or the reader. Because the body is metaphorically incorporated within various aspects of literature and technology, its structure could also be paralleled, represented and embodied in other structures. Any structure can be made to represent bodily function, bodily action and bodily interaction. Examples of these structures include the literary corpus and the connectivity of the World Wide Web. The corpus represents the relational, collective body of texts in a particular set. Conceptually, one important aspect of the web is the desire for collective interactions that represent notions both of collectivity and autonomy. The textual and virtual bodies are based on the notions of connectedness. However, experience in the textual and virtual community can represent problematic issues for a body that is physically left outside of the system.

The significance of the word corpus is apparent in literature in the description of a corpus as a body of works. Dani Cavallaro believes that "the Latin word for 'body,' corpus, has survived in modern English in two main forms: corpus and incorporation" (154). A corpus can represent works that are from a particular author but they could also indicate other texts that have spawned from an original. The notion of incorporation represents a fundamental process of unification (Cavallaro 154).

Incorporation can be represented in a variety of global contexts. Firstly, various elements of incorporation or inclusion involve objects, people and ideas, environments, political systems and technology (Cavallaro 154). Secondly, incorporation deals with notions of the physical body and its application to notions of embodiment and the physical fusion of flesh, blood, muscular activity, etc. Finally, incorporation challenges the idea of unity because "it reminds us that we experience the world in a fragmentary fashion, through multiple channels" (Cavallaro 154).

The literary corpus, like the body, is based on an organizational structure, a process of identification, and the notions of unification and separation. It could be argued that understanding a text involves an implicit determination of the identity of the text. The identity of the text is "not just a group of signs and rules that need to be arranged to convey textual meaning, but a concrete group of signs that display a particular organization" (Gracia 119). The order and organization of the text allows the reader to conceptualize, identify and relate to what is transpiring in the text. However, reading a text involves a certain amount of fragmentary interaction. The reader is outside the pages of the text but there is an understanding and interpretation that is realized in a familiar medium. On the other hand, cybernetic forms of media appear to have a difficulty incorporating the user because "the reader knows what to do with a book, but is much less sure what to do with electronic

information" (Hockey 133). As the computer becomes more of a common fixture in many modern households, users will begin to have a greater understanding of the technology.

Although there may still be a lack of complete understanding of the technology, individuals initiate a physical attachment to technological devices; an emotional and embodied relationship (Lupton 97). Deborah Lupton has discovered that users are dependant on technology, despite very little knowledge of how the technology works and what lies behind the "bland blue screen" (98). It could be argued that the casual, everyday user interacts with technology in the same manner as with the environment; individuals have a general sense of what is happening with the environment but not all "users" have the precise knowledge of what lies beneath the surface. For those individuals who are familiar with their working environment, be they literary scholar, computer scientist, or other, there may be a greater sense of security in their system knowledge.

It is also evident that computers have become a component of society that influences the body. Michael Heim describes this phenomenon as follows:

> The computer has become an ingredient in human knowing. Instead of confronting a potential rival, we find ourselves interfacing with computers. Computers are woven into the fabric of everyday life, and they have become an important thread in the texture of Western Civilization (60).

The body is in the process of incorporating the technology that emerges in everything from communication to interaction and learning. Technology is accepted or realized as a meaningful relationship with a variety of possibilities based on prior technological dependence. As Heim suggests, technology is a mode of human existence and the appreciation of both its bodily and mental infiltration are realized in its emergence as a cultural phenomenon (61). Other scholars may choose to represent a cybernetic relationship as "a host of fictional and theoretical speculations about the total transformation of the human body which occurs through its interpolation in the nascent information networks" (Clark 114).

Predominant notions of networks and linking influence a variety of writing on cyberspace and the body. The physical body is a networked system because of its connection of muscle, tissue and bone. Similarly, networks are also apparent in the collection or body of works that comprise a corpus. Texts could be described as having links through lineage, where the original text is reanalyzed and reinterpreted in order to create a spawn of the original. Dani Cavallaro would describe this form of linking and lineage as absorbing scraps of information (155). The physical, textual and virtual bodies represent structures that absorb information. In each case there is an original creation but there is also a representative body, a collection of individuals, a corpus or a web that exists as a result of the original; it is constantly changing and adapting

through encounter and absorption. According to Heim, "we feed input into the system, which then constantly feeds information back to us" creating a form of interaction like a "feedback loop" (75). In order to understand the makeup of any structure or interaction, the context of the surroundings and the presentation of information should be analyzed.

While attempting to understand bodily identity, there is a realization of the body in cyberspace. In cyberspace reality, identities can be selected or discarded almost at will. This cyber environment is a place where "identities are composable in so far as the constraints of the real world and real-world body are overcome in the artificial domain" (Robbins 138). One example of a selection of identities occurs in the cyber chat room. Many chat rooms allow the user to create an identity with many definable characteristics such as age, hair colour, body shape, etc. [14] It is important to note that both cyberspace and textual environments require an omission of reality. When reading various novels, the reader is often invited to enter a new or alternate reality. Samuel Taylor Coleridge described this phenomenon as the willful suspension of disbelief. For example, in a spy novel the reader feels engaged with the inspector, jumping into the fictional world, helping to solve the crime. The difference however, is the level of interactivity that is assumed in

[14] Cyberspace provides a variety of chat room services to choose from such as MSN Chat. This is a chat room service with an aggregation of different rooms. There are specific theme-based chat rooms that deal with just about everything, like sports, news, cooking, and so on.

cyberspace. The world of cyberspace promises that "we shall receive all the gratifications that we are entitled to but have been deprived of; in this world, we can reclaim the (infantile) illusion of magical creative power" (Robbins 139). Cyberspace attempts to offer, "some kind of technological fix for a world gone wrong" by promising a restoration or a creation of new virtual communities (Robbins 152). The virtual community could be realized as a newly created community without preexisting rules, order or bodily definition.

The notion of a virtual experience beyond rules and bodily organization can be debated. Initially, a new user of cyberspace technology may come to realize the virtual space as a "not quite reality" where the experience is one of lacking (Flanders 127). The environment is comprised of a representation of the real world, a "rendering of a landscape with spiky mountains and preternaturally smooth surfaces" (127). While cyberspace can create a representation of the real world in order to provide comfort, it can also represent harsh or confusing representations. If the user can identify with virtual objects, even though the objects may be oddly smooth or rough, there is a willingness to engage with the interface. However, it is possible that "the most important component that is lacking is the body: virtual objects and activities appeal or perplex by the friction they set up between themselves and their ordinary physicalized original" (127). The user moves from link

to link, page to page engaging in virtual activities until the fantasy becomes impeded by realizations of reality.

Neal Stephenson's *Snow Crash* represents a "metaphoric equation between humans and computers" where the human being is represented as a computer (Hayles 273). In this case, one of Stephenson's characters reasons that:

> There must exist in humans a basic programming level, comparable to machine code in computers, at which free will and autonomy are no more in play than they are for core memory running a program. (Hayles 272)

What is significant about *Snow Crash* is the idea that our technological associations go beyond simple connections; that our bodies are, in fact, computers. Once this parallel is made, "everything reduces to information storage, production, and transmission" (Hayles 275). Therefore, human interactivity is altered as a result of a fundamental connection between the body and computers because they are both reducible to basic functions.

One reality-based function that impedes the connection between the body and the computer is the speed at which you are traveling through cyberspace. A slow modem, a foundationally real construct that enables cyber activity, would significantly alter quick virtual progression. Another example is Flanders' notion that virtual shopping is an effortless process. In this case, the user "floats effortlessly through the air and buys

things by pointing to them" but an accidental purchase of a forklift is humorous "because the machine's physical awkwardness is immaterial in the virtual world, and its gigantic price tag ends the fantasy by being irreducibly real" (127). Flanders notion would appear to contradict that of Robbins. Flanders believes that no matter how much the user is convinced of a new environment, one without boarders or restrictions, it is still founded on the principles of real life experience. The online shopper will be charged full price for the forklift she has purchased and will face real world consequences and penalties despite the illusion of fun and inconsequence.

The media is also guilty of propagating the notion that the virtual world is seamless and can provide adequate space and accommodation for the body. According to advertisements for Microsoft's Windows software, bodily interaction in cyberspace comes complete with the ability to fly or float effortlessly. Other advertisements such as the Progressive Insurance promotion for instant online results, displays a man changing everything from his broken arm to the appearance of his apartment with the click of a mouse.[15] This enthusiastic view of the virtual is based on construing the virtual as "a postmodern space, in which the signified, the loss of the body is a severance of the bonds between the sign and the

[15] For more examples of websites claiming instant results see:
http://www.instant-results.com/
http://www.progressive.com/

signified, the loss of a referent which was never really there to begin with" (Flanders 128). In order to promote a body that has unreal abilities in cyberspace, there must be some form of disembodiment; something surreal that can only occur outside the body. However, it is possible that "the body is a fetish on which we mistakenly pin our hopes for meaning and certitude and authority; the virtual space is a space of freedom from such imaginary grounding" (128). Therefore, the virtual environment is a place where the perception of a body can exist but it can be altered and manipulated in order to enhance the notion of alternate experience.

The emergence of cyberspace involves relational structures, identification, and alternate means of amalgamation. The development of the web suggests an attempt to create the idea of form or connection. In *The Laws of the Web*, Bernardo Huberman describes the web as a system that displays "erratic behavior" despite its deterministic, mathematical description (21). According to Huberman, the web is difficult to study because it represents a distributed non-linear system. The structure and dynamics of the system is "determined by the collective interactions of its many autonomous parts, which include consumers, organisms, computer programs, or people" (Huberman 20). The textual body, like the web, plays on the idea of collective interaction, as its narrative represents the actions of the body in relation to society, various organisms, people, etc. The physical body is affected by collective interaction, in particular, the

actual, virtual and literary promotion of the body because the reader is able to analyze the body in different situations and contexts. Analysis of the body in different environments, experiences and interactions lead to alternate perceptions of the body.

Our social networks lead to experiences and interactions that change processes of thought, perception, and even smaller elements such as outward appearance and general movement. According to Huberman familiar experience is quite common and our relationships are often connected by Stanley Milgram's "six degrees of separation." [16] Huberman describes physical connectivity as:

> A surprising and interesting social phenomenon . . . which holds that between any two people on this planet is a path of no more than six acquaintances linking one person to the other. While the exact number may not be six, it is the case that most often a short chain of acquaintances is all one needs to connect any two people chosen at random. (34)

The importance of Huberman's statement is the premise that chains of acquaintances connect everyone and our social networks are based on a linked, networked structure. However, like the web, the awareness of the social network may be lost on the user. Therefore, the notion of linking and bodily connection is represented in our desire to create the image of the web as a friendly, "small-world" environment where the connections create the perception of a community.

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[16] For more explanation on the "six degrees of separation" experiment, see pp 33- 34 of Bernardo A. Huberman's *The Laws of the Web*.

The ideas of a social network, index model and specific mapping are discussed by Ian Chambers in his article "Cities Without Maps." Chambers contends that if something can be reduced into a map, the user will begin to grasp an outline, a shape or some sort of location (611). The body, for example, is mapped and outlined so that individuals may attempt to grasp its intricacies and composition. The notion of a World Wide Web suggests a desire to map and organize a multitude of links. Mapping, or creating the illusion of a web and organizing the body, is described by Chambers as:

> An implosive disorder that is sometimes liberating, often bewildering that results in an interpolation in which the imagination carries you in every direction, even towards the previously unthought. (612)

However, in terms of understanding bodily, textual and cybernetic composition, a movement towards the unthought might be beneficial. In many cases, imagination and movement towards the previously unthought provides alternate modes of conceptualization and analysis. For example, before the 1990's, almost no one could have conceived of the effects of the internet on communication, research and the arts. It would appear that the notion of the unthought creates a certain amount of fear because it is outside of the traditional modes of understanding.

In opposition to a desire for an electronically connected community is the perception that cyberspaces will enable a body that is

controlled by the environment. Currently, humans make the decision to rely solely on computer calculations and manifestations of the virtual as fact or reality. For this reason, it could be argued that there is "no priori [*sic*] evidence to suggest that automation will make society less human" (Visser 188). However, ubiquitous computing enables a user that is unaware of the effects of technology on the body. Moreover, once the body becomes dependent on technology, it may become more difficult to distinguish between technologically facilitated interaction and pre-technological interaction. The issue appears to be reliability in terms of networking and isolation in cyberspace. If the network propagates community and bodily interaction, then the system is successful in integrating the human subject. However, if the individual, while networking, "does not contribute to mutual solidarity, but tends to isolate people in an anonymous identity," the system might eventually fail (Visser 190).

In the cyber-community, inhabitants encourage the process of realizing a new identity. Cyberspace allows the individual to interact with others who have created a new "I," a new bodily identity (Wilbur 8). In this system, the user creates the image of an altered self- identity, one that appears "in a lonely crowd where no one can really get to know the true 'I' or the true self" (12). The creation of a new identity leaves the body without meaning because no representation can adequately fix the body

in an image (81). While the representation can be meaningful, it will continue to lack "the simplest kinds of awareness like the kinesthetic body movement, organic discomfort, and propriosensory activities like breathing, balance and shifting weight" (Heim 81). The individual bodily components make up the complete structure of the body. The virtual environment attempts to accommodate the image of the "I" in hopes that the user will eventually forget about the lack of physical interaction that is taking place.

Social relationships and interactivity are now being mediated and represented by virtual technologies. One component of cyberspace, e-mail, represents a system of technological mediation that can only be accomplished through various technological devices. Millions of e-mail and text messaging users express needs for frequent and quick connections in order to realize real time connectivity. Wilbur describes this phenomenon as "a sort of textual flirtation that only occasionally aims at any direct confrontation of voices or bodies" (13). Because it is only an occasional aim to interact with physical bodies, it may be the case that "the user discovers that they are alone as they navigate virtual oceans, unravel virtual mysteries, and engineer virtual skyscrapers. But increasingly, other people are there as well" (Turkle 5). Users feel as though they are interacting independently from others because they are situated in front of their own machine. The technology facilitates forms of

interaction in the virtual community and it is manifested through disembodied modes of interaction. Virtual bodies, the manifestations of the self, seemingly navigate these worlds alone although they are a part of a system that connects all users through a real, physical construct: the computer.

Cyberspace is an accommodating reality because an identity can be selected or discarded at will. Identities are composable in so far as the constraints of the real world and real world body are overcome in the artificial domain (Robbins 138). Thus, real world constraints are minimized in the user's ability to redefine bodily boundaries. In the cyberspace community, "technology promises to deliver its user from the constraints and defeats of physical reality and the physical body" (139). Cyber-citizens appear to have the power to escape from the physical confines of everything in the material, tactile world. Cyberspace provides an environment that appears to offer some kind of technological fix for a world gone wrong; it is a restoration, a new frontier of community, community order and bodily interaction (152). It conveys the notion that the user has a chance to reconfigure the body or create a new body or new image that is acceptable. However, the new community is problematic because it is based upon the premise of fiction and alternate identities. Because the construct of the body and the actualities of the real world are

less apparent, the user is left with a distorted sense of freedom in a community based on constructed commonalities.

The cyberspace community could also be represented as an "increasingly populated universe, a rapidly evolving civilization with its own history" that represents a dimension within the real world (McRae 73). For McRae and Haraway, the representation of the cyborg in film is an extension of an actual living, breathing cyborg. The cyborg is no longer "a fiction mapping our social and bodily reality, but the lived experience of millions of people who spend most of their time working and playing in digital space" (74). As individuals become accustomed to a perceived lack of real, physical parameters the "mind, body, and self all become consciously manufactured constructs through which individuals interact with each other" (75). One fear that arises from McRae's notion of the virtual is that the removal of physical parameters will lead to some form of chaos.

It is possible for cyberspace to be described as a chaotic environment if a rift is created between the body and communication. This rift becomes apparent as the user interacts in an environment with "disembodied voices and decontextualized points of view" and where "the majority of one's correspondents have no bodies, no faces, no histories beyond what they may choose to reveal" (Porter xi). Porter's view enhances McRae and Haraway's view that cyberspace lacks physical

parameters. In this case, the parameters are based on reconstituting faceless words into bodies and rewriting the traditional boundaries of real and virtual experience (Porter xii). While the body remains in a static physical state in the real world, it could be described as a cyborg in the virtual world if the individual believes in an ability to physically alter gender or enhance body image with the click of a mouse. The notion of the altered or enhanced body could be problematic because it promises to create an autonomous self without boundaries. However, our current technology does not allow for a physical reconstruction and re-creation of the body.

The idea of physical recreation and the possibility for an autonomous self, independent of the environment "authorizes the fear that if the [physical] boundaries are breached at all, there will be nothing to stop the self's complete dissolution" (Hayles 290). In order to further understand the body and its relationship with technology, the user should attempt to move away from a detrimental, all consuming notion of technology. In fact, an analytical, cautiously optimistic view would further enhance our understanding of the body in a myriad of other contexts; the most important of which is its role in the use of technology, its environmental capacity and its relational metaphors. Although there will be some anti-human and apocalyptic views of the body in relation to technology, "we can craft others that will be conducive to the long-range

survival of humans and of the other life-forms, biological and artificial, with whom we share the planet and ourselves" (291). While technology can be viewed in both a positive and negative light, it is evident that our bodily and technological interactions will continuously evolve as time progresses. What is important is the way in which the user of cyberspace comes to understand the role of the body in the virtual world and the experiences that are shaped. The web, a connective construct, has and will continue to enable the facilitation of interaction and communication. However, the ability of the user to construct an alternate identity may lead to a constant debate and concern over the role of the real, physical identity. On the one hand, the construction of the virtual self problematizes the notion of uniqueness and bodily individuality. On the other hand, cyberspace may provide an environment for greater understanding of self. Therefore, while it is important to analyze the emergence of the alternate self in the virtual community, it is also important to realize the extent of bodily immersion or abandonment.

Conclusion

When analyzing literature and film, there is a notion of a body that transcends media. Often, theorists and filmmakers are quick to present a body that is either a reducible element that is of little significance or a body that will inevitably be reconstructed or lost in a virtual landscape. While it is possible to quickly accept or dismiss prophecies of the body, what is significant is the analysis of the body that is taking place. Because the body is one element that all human beings have in common, its importance is undeniable. However, because everyone chooses to perceive of the body in a variety of ways, I believe that there should not be a quick dismissal of any ideas or theories that pertain to the body.

One of the major aspects of bodily understanding is based on the multiple representations of the body. Because there can be a variety of bodily interpretations, the analysis of the appearance of the body in literature, film and cyberspace creates a continuous process contextualization. These contexts allow us to understand our own perceptions of the body as well as those interpretations of an author or director.

Another aspect of bodily understanding comes from our use and understanding of metaphor. Our use of metaphorical language dictates, to a large extent, the perceptions of the body and the level of bodily immersion. Through a greater understanding of our use of metaphorical

language, we are better able to contextualize our bodies within both a physical and virtual environment. The emergence of such things as electronic texts, provide us with another avenue to question the physical relationship that we have with various media. When analyzing technology such as hypertext, it is important to keep an open mind to the types of interactions that are taking place so that we might better understand our relationship with technology.

Further representations of the body can also be achieved through our understanding of incorporation. Often, bodily incorporation of metaphor is a desire to relate specific media such as literature and cyberspace to the body. Elements such as the literary corpus and the bodily representations of cyberspace linking represent a need to create body-relational objects. Once the objects are personified, a greater sense of security is established within the system. At the same time users are achieving a greater sense of security, others are attempting to create an alternate self, one that represents the user's desired self image. In this case, the importance lies in the level of inclusion in the system. It is therefore important to realize the long-term affects of continuous work and play in a cybernetic, image-based environment.

The previous four chapters have been an attempt to represent and analyze a variety of contexts for the body. However, there are some elements that could be analyzed further. One element is the limited extent

of analysis involved in the presentation of the cyborg. In this case, there are various other literatures, films and cyborg theories that have not been examined in detail. It has been my desire to present some of the pertinent contetxulizations of the cyborg in order to further emphasize a perspective of the cybernetic or altered body.

Further, Katherine Hayles *How We Became Posthuman*, analyzes the cyborg as a representation of a posthuman subject. In this case, I have made a conscious effort to avoid a discussion of the term posthuman. I believe that extensive analysis would be needed to develop this term in relation to the cyborg.

I believe that the most important element of my research has been to explore the epistemological significance of the body. Because of a variety of technologies, the body is being examined in a variety of contexts. These contextualizations help us to understand the role the body plays in influencing current media but also allows for a re-examination of past bodily representation. Because the bodily metaphor is used in a variety of ways, this suggests an attempt to relate any and all elements that use these metaphors back to the body. In doing so a parallel is drawn between the individual body and the object, thus creating a significant link. What is important is not the way in which these links are studied but the conclusions that are drawn. We must be able to further research the

effects of literary and cybernetic media on the body without immediate conclusions of bodily doom or positivistic re-creation.

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